

## University of Groningen

# Large flock of Choughs *Pyrrhocorax pyrrhocorax* harvesting caterpillars in pinewood on La Palma, Canary Islands

Piersma, Theunis; Bloksma, Nienke

*Published in:*  
Bird Study

*DOI:*  
[10.1080/00063658709476947](https://doi.org/10.1080/00063658709476947)

**IMPORTANT NOTE:** You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
1987

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*  
Piersma, T., & Bloksma, N. (1987). Large flock of Choughs *Pyrrhocorax pyrrhocorax* harvesting caterpillars in pinewood on La Palma, Canary Islands. *Bird Study*, 34(2), 127-128.  
<https://doi.org/10.1080/00063658709476947>

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

## Large flock of Choughs *Pyrrhocorax pyrrhocorax* harvesting caterpillars in pinewood on La Palma, Canary Islands

THEUNIS PIERSMA and NIENKE BLOKSMA *Korte Nieuwstraat 4, 9724 LC Groningen, The Netherlands*

Many species of crows Corvidae may form feeding flocks (Goodwin 1976) and the Chough *P. pyrrhocorax* is no exception. Cullen, Guiton, Horridge & Pearson (1952) reported flock sizes up to 300 birds in the Canary Islands. In this note we report on observations of 350–400 Choughs in pinewood on La Palma, Canary Islands.

La Palma is the westernmost of the Canary Islands and the only one where Choughs occur (Goodwin 1976). We visited the island between 18 and 26 March 1986 and encountered a total of 450–500 Choughs in different places. Most of the birds were seen in a single flock of 350–400, which we found on 24 March at a height of 1300 m above sea level on the mountain ridge that runs north–south over La Palma (Laderas del Gallo; 14°09' W, 28°36' N). Much of Laderas del Gallo is covered with a monoculture of Canarian Pine *Pinus canariensis*. The trees are rather uniform in size (15–25 m high) and 4–8 m apart. There are no shrubs under the pine trees, only a layer of dead pine needles.

The Choughs were discovered feeding in the pinewood at 13.20 hr and were followed until 16.30 hr. They could be approached to less than 15 m and were observed with 10×40 binoculars. On the next day, from 15.00 to 16.00 hr, Choughs were seen again in the area but the group was probably smaller and certainly less compact then. That day we sampled the layer of dead needles, the trunks and the foliage of the trees for potential prey. Some of the caterpillars and pupae found were collected and stored in formalin for later identification.

On 24 March we were able to count the Choughs during communal flights, which occurred 3–10 times per hour. Greatly in-

creased calling announced each communal flight. During the 1–5 min flights, the flocks travelled as far as 1 km away from the feeding site but always returned to the same part of the wood, an area of about 200×200 m. In contrast to their take-off, the return of the flocks into the wood was inconspicuous: the wood suddenly seemed to be filled again with foraging Choughs.

The birds used 3 foraging methods. Some walked on the ground: they pecked in the layer of dead pine needles, bull-dozed heaps of needles away with the bill to uncover open ground, and turned over the occasional stone to look under it. Other birds clung like woodpeckers to the rough bark of Canarian Pines, pushed their bills under the bark and turned and twisted them. They often managed to detach large pieces of bark. Some birds worked on the bark from thick side branches. Yet other birds perched, hung, or 'hovered' in the tops of branches to peck in the terminal bundles of pine needles. Since many of the branches were not strong enough for Choughs to perch on, they had difficulty in keeping their balance and had to flap their wings (see Smiddy 1986 for a similar observation).

Of about 30 prey seen to be eaten by the Choughs, 25 were caterpillars and 5 pupae of the endemic moth *Macaronesia fortunata* (Lepidoptera: Lymantriidae); the caterpillars were hairy and 2–5 cm long. We found caterpillars on the ground (sparse), on the trunks (common) and in the bundles of pine needles (abundant). In the area where the Choughs were feeding, we found caterpillars in 109 of 213 of the bundles of needles that we could reach from the ground; we found none in 320 needle-bundles checked in another part of the wood which was not visibly affected by the

caterpillar plague. Though only a few km away, no Choughs were heard or seen here during 18 hr that we spent there.

After capturing a caterpillar or pupa on a trunk or on a branch, Choughs always flew to the ground, where the prey was manipulated in the bill and often beaten against a stone or a piece of wood before ingestion. Handling times lasted 10–40 s. After ingesting the prey, the birds wiped their bills against stones or tree trunks for a few s.

The Choughs foraged 0.5–3 m apart. Sometimes one bird displaced another bird from a feeding site, often on a trunk. It was apparent that some birds operated in twos, one bird being bigger than the other. Twice we saw a bigger bird give a caterpillar to a smaller bird. On both occasions the bigger bird gave a short harsh sound before the exchange of prey, possibly to alert the receiver. Since male Choughs are reported to be somewhat larger than females (Goodwin 1976), we are tempted to interpret this prey exchange as courtship feeding. It should be noted that we saw nest-building behaviour in a pair of Choughs at another site on La Palma during the same week.

The short harsh sound before prey take-over was the only vocalization of feeding birds that we noticed. This does not mean that it was quiet in the wood where the Choughs were foraging: on the contrary, there was continuous calling by the few birds that were always on the wing over the feeding site.

The moth *M. fortunata* is a well-known pest species of the Canarian Pine (Gomez Bustillo

& Mendez Garnica 1980). It affected the pinewood in patches, which could easily be recognized when viewed from a distance. The brown colour of the affected patches, resulting from most pine needles being eaten by caterpillars, stood out against the green colour of the unaffected pinewood. By harvesting the abundant caterpillars and pupae, the Choughs took advantage of this temporary pest. Since caterpillar plagues are said to occur irregularly (Gomez Bustillo & Mendez Garnica 1980), it is unlikely that the Choughs on La Palma can benefit from this abundant source of protein for each breeding season.

## ACKNOWLEDGMENTS

Willem Hogenes (Zoological Museum Amsterdam) kindly identified the caterpillars. We thank Johan van Rhijn, Kees van Scharenburg and Amotz Zahavi for reading a draft and suggesting improvements.

## REFERENCES

- Cullen, J.M., Guiton, P.E., Horridge, G.A. & Peirson, J. (1952) Birds on Palma and Gomera (Canary Islands). *Ibis*, **94**, 68–84.
- Gomez Bustillo, M.R. & Mendez Garnica, J.M. (1980) El ciclo biologico de *Elkneria pudibunda* (L., 1758) en la peninsula Iberica (Lep. Lymantriidae). *Bol. Estac. Cent. Ecol.* **9** (17), 79–83.
- Goodwin, D. (1976) *Crows of the World*. British Museum (Natural History), London.
- Smiddy, P. (1986) Choughs feeding on top of vegetation. *Brit. Birds*, **79**, 251–252.

(MS received 21 November 1986; revised MS received 10 January 1987)